MICHIGAN FARMER.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC ECONOMY.

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BY H. HURLBUT,

EDITOR AND PROPRIETOR.

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[For particulars see last page.]

Calendar for September.

BY S. B. NOBLE.

Kitchen Garden.—The sowing season may now be considered as past. Those who desire to do so may sow lettuce, pepper-grass and radish for late fall use. The garden should now be cleared of weeds and decayed stalks of vegetables. Gather winter squashes that are ripe, before the frosts injure them. Secure onions and other vegetables that are ripe.—Gather pea brush and bean poles, and secure them for next year. Spade or plow all vacant ground, leaving the soil in ridges for the action of the frosts and destruction of the eggs and larvæ of insects. All dry and decaying vines and seed stocks should be *burned* on the ground, which will be likely to destroy a numerous progeny of insects, that would otherwise make their appearance in the spring.

Flower Garden.—Tulip, Hyacinth, Narcissus, Star of Bethlehem, Crown Imperial, and other bulbs that were taken up in June and July, may be planted the last week in this month. Dig the soil deep, make it rich, and plant the bulbs from one to three inches deep, according to size. From the 15th to 25th, you may expect Dahlias to be destroyed by frosts; after which, cut off the stalks a few inches above ground, dig up the roots, and let them dry partially, and put them in a dry cellar. Transplant biennial and perennial flowering roots and plants the last of the month. For the last four or five years, we have had severe frosts from the 13th to 20th, from one to three days, which have usually been followed by mild, pleasant weather for nearly two weeks. To secure Dahlias and tender vegetables, drives stakes firmly into the ground, over which put *two or three* thicknesses of blankets, old rugs, or what is most convenient; let them hang on each side close to the ground; the stakes should be so high that the cloths cannot touch the Dahlia buds or leaves.

Fruit Yard and Orchard.—Dig the ground well around the trees, and place around the trees and bushes old chip manure—cut out all decayed branches or twigs.

For the Michigan Farmer.

Hints to the Cultivators of Fruit.

NUMBER V.

The peach is subject to a disease called the yellows; its presence may be easily detected by the appearance of the leaves, which assume a sallow sickly hue. There is no remedy known, and the sooner a tree that is diseased is cut down and burned the better. The disease may be, and is no doubt often ignorantly and incidentally propagated by inoculations. Plunge a knife into the bark of a diseased tree, and then into a healthy one, and the disease will show itself in a few days. Using a pruning knife or saw upon a healthy tree, that has been used in pruning a diseased one would communicate the disease, or budding from scions taken from an affected tree would produce the same effects. The cause of the disease is not known; recently, however, the cultivators of the peach in the region of New York, attribute it to the forcing of the trees in the nursery when young. Trees that have been reared upon a poor soil, it is said, have escaped the disease, while those that have been forced have been subject to it.

The peach is liable to the attack of the borer, or gnat, as it is generally called. Their ravages may be discovered by the appearance of the body of the tree near the surface of the ground; they usually commence their attack just below the surface and work upward, and their appearance is indicated by the gum oozing at or near the surface. Take a sharp knife, and cut them out and destroy them. Sometimes you will find but a single depredator—then again you will find them by dozens. The best remedy with which I am acquainted is, to remove the earth from around the body of the tree to the depth

of two or three inches, and fill up the hole with leached ashes. Latterly I have taken the precaution to apply the ashes when I transplant my trees, and since adopting this expedient I have not been troubled with them.

A HORTICULTURIST.

For the Michigan Farmer.

Canada Thistle.

This pest so much dreaded by the farmer, has made its appearance in this State, and if suffered to scatter its seed to the four winds of heaven, it will ere long wing its way over Michigan to the great annoyance and discomfort of the farmer. Having purchased a lot in one of our Eastern cities, some fifteen years ago, I built upon it, and on enclosing it I found to my terror a patch of the Canada Thistle growing near the line of my fence, and as I had been taught to believe that where they had once taken possession of a piece of land, no moral, legal, or physical power could eject them from it, I concluded that if I could prevent them from migrating into my enclosure, I would be contented. So I watched them narrowly, and just as soon as they began to put forth their blossoms, I took my hoe and cut them off, one by one, some two inches below the surface of the ground. The year following I went out to repeat the operation, and to my joy and surprise I found but here and there a straggling plant alive. These I soon decapitated, and the whole patch, covering an area of some hundred feet square, became defunct. Subsequently I found a few plants in my garden; these I treated in like manner and they too were exterminated. Your readers, Mr. Editor, will draw their own inferences respecting the above facts; but if they are wise they will follow suit just as soon as the thistle makes its appearance upon their farms.

OAKLAND.

(See further on this subject, page 95. ED.)

For the Michigan Farmer.

Housing Sheep.

NUMBER IV.

MR. HURLBUT:—In perusing the numbers of the Farmer that have been issued during my absence from the State, I discover an article containing some remarks on the system of housing sheep advocated by me, by T. L. Spaffard; which although in opposition to my views, is nevertheless gratifying to me, as it tends to attract the attention of your readers to a branch of business that I consider of vital importance to this western country. And although Mr. S., and myself may differ in our opinions, yet as we are writing on the subject of sheep, which of all animals is the most meek and gentle, it is to be hoped and expected that the same disposition will be manifested during this controversy.

Now as my own experience in this system is quite limited, in reviewing the remarks of Mr. S. (which, in justice to myself, I feel that I am bound to do) I shall produce some testimony from the writings of L. A. Morrell of Lansing, Tompkins Co., N. Y., which have been kindly furnished me by a friend since my return. It appears that Mr. Morrell had practiced housing sheep between three and four years, and was therefore well qualified to judge of the utility of the system.

It is far from being my wish to engage in a controversy with any one, but I think some of Mr. S.'s statements should be noticed; although I have not so poor an opinion of the intelligence of your readers, as to suppose they cannot discern the fallacy of some of his positions.

In the first place, Mr. S. states that "a saving of keeping and life, and an improvement of the quantity and quality of wool are not in his opinion the most important objects to be secured." I am not disappointed in finding some opposition to housing sheep, but I must say that I did not expect to find one, especially a wool grower, make so inconsistent a statement; and did I believe this class very numerous, I would particularize in my essays, that I wished to attract the attention of those that wished to preserve life as long as possible, and reap the largest amount of wool: but I cannot yet believe there are many who regard those objects as of minor consideration; and as he has not specified what the most important objects are, it is to be presumed that it is a secret which most of your readers would like to be made acquainted with, as at present not a small proportion of our farmers are turning their attention to this branch of husbandry. It is to be hoped that Mr. S. in his next communication will not forget this point; for we consider that all who take any interest in agricultural papers, have a claim upon each others knowledge, that all may be mutually benefitted. Come, neighbor, let us have the whole story.

Mr. S. next considers that "the effluvia arising from decaying litter would certainly impair the constitution and engender distempers." For this supposition I will not censure him; for this was my opinion at the time I put mine into the apartment prepared for them, unless their quarters should be frequently cleaned out. I immediately wrote to S. C. Scoville, Esq., of Salisbury, Ct., for information on that, as well as some other particulars connected with the system, and waited with much anxiety for an answer. Mr. Scoville had practiced sheep-housing for at least twelve years, and was fully competent to give all necessary information. In his answer on this point he says: "There will be coarse buts and stalks in the hay, which they will not eat, sufficient to absorb so great a proportion of whatever moisture may naturally be produced that no danger will arise from that source; better not stir it, until after the sheep have gone out in the spring." This I found to be true. It was remarked by some who saw them before they were let out, that it was surprising that there was no unpleasant air in the apartment. No one would have supposed that they had been in the enclosure two hours, so far as it regarded any offensive effluvia arising therefrom.

Mr. S. appears to think lightly of keeping the saved, in consequence of housing. As I promised some testimony from Mr. Morrell in this communication, we will see what he says on this

score. After following sheep-housing about four years, in making an estimate on the profits derived therefrom, he has put down $750 in oats for the whole time, exclusive of hay, which he thinks amounts to about one ton per hundred sheep each winter; which would make something of an item, as he kept during that period from 1600 to 1900 sheep. The above may be found in the 4th volume of the Genesee Farmer, No. 5., Page 74. Not so despicable an amount, admitting, (as Mr. M. Says) "that calculations based on figures do not lie."

Mr. S. states also, that "experience teaches that disease, and distempers are far more frequent in warm than in cold weather." Hold on, brother wool-grower, while I address a word to you. If you mean by cold weather, the entire season of foddering; I will readily join issue with you on this declaration, if you please, and send for persons and papers. He further says, "I think it must be decidedly injurious to keep ewes in close confinement during the whole time of feeding. The old adge is, that like begets like—and philosophy and experience demonstrate it. Consequently the offspring would be like its progenitor—weakly and predisposed to disease."

As this statement requires more experience than I have had to refute it, I will present you with a quotation from Mr. Morrell on this point. He says: "I proceed to show that protection will tend to increase the number of lambs—prevent diminution of size, and degeneracy in every particular. The period I have chosen for ewes to drop their lambs, is during the month of May. When this truly important time arrived, very many of them were sadly impoverished, and of course feeble; the consequence was many of them were unable to rise without assistance. It is easy to conceive what was the nature of the offspring from the nature of the dams; small, puny, ill constitutioned affairs; and if they lived at all, from want of sufficient supply of aliment, were, comparatively, a race of runts. My losses were very great, especially if a prospective estimate is made. It is almost useless to remark, from the character of such a progeny, that when winter came, it brought with it the terrors of death to many; and the poor things might well have thought, in the language of the infant's epitaph:

"Since we are so soon done for,
Wonder what we were begun for?"

But since protection, I have a very different story to tell you. The ewes, when the lambs were folded were hearty and strong; and it can be said with truth as it is a personal business; I have not found during the last three seasons, altogether 20 ewes needing the assistance above mentioned. The lambs were alike healthy with the dams; the losses comparatively nothing; from the ewes possessing abundence of nutriment, in part owing to good condition, the offspring grew rapidly, and upon all this nature founded good constitutions. To confirm the importance of what we farmers call a good start—the winter of 1836 and '37, out of nearly 500 lambs, I lost—incredible as it may seem—only two! but they received as is common every winter my personal attention. To show further the importance of early, thrifty condition, and applicable to all kinds of domestic stock—the sheep of my flock that were born since protection, (now three years,) are larger and finer formed than those which are older. This, I assure you, is not mere fancy; and if confirmation is necessary, by calling on me, I will abundantly satisfy you. The conclusion is—that a dam in good condition will generally produce a healthy and vigorous offspring; ergo, the necessity of protecting sheep, as a means to promote this condition."*

Here you have it, not from mere reasoning or suppositions, but from experience. There are several other points, in Mr. S.'s communication, which are equally deserving of notice, but as this is perhaps already too protracted, I must defer them for the next number. G. J. BARKER.

Manchester, August 20th, 1845.

*Genesee Farmer, Vol. 4—No. 4, Page 61.

Our friend Jonas Doolittle is a lucky fellow—for he is favored with answers on the subject of his queries from two correspondents, both of whom appear to "know something about it." In fact, these two articles seem to cover the whole ground, and be all that can be desired on that subject.

For the Michigan Farmer.

Planting Peach Stones, &c--Inquiries Answered.

I noticed in your last No., an inquiry by Jonas Doolittle about the proper time and manner of planting peach and plum stones, &c. I once experienced the same difficulty he complains of, and lost several seasons and much pains in collecting the best kinds of stone fruit, by planting the pits either late in the fall, or not until the following spring. For a while I could not account for the failure, until it occurred to me that nature did not pursue that course, but planted the pits as soon as they were ripe enough to drop from the tree. By too long keeping, removed from the pulp or the soil, it would seem that the seed becomes dried and its vitality lost, and I think also that the shell or integument becomes so hard and firmly united at the suture where it opens, when the seed begins to germinate, that it remains closed, and thus the seed perishes. By being immediately deposited in a box with earth, they may be planted out when the bed is prepared, the pits are kept in a moist state, and if exposed to frost the shell is more readily burst open; though this may be done to advantage artificially, early in the spring.

Steeping in boiling water is often important for such seeds as have a very thick integument, as beet seed and the seed of the locust tree, which require a long exposure to the ordinary dampness of the earth, before they will become sufficiently affected by it to reach the point of germination. It seems to me more than doubtful whether it is requisite in the case of apple seeds. I have never failed in raising a good crop by planting from the pumice in the fall. B. HUBBARD.

For the Michigan Farmer.

Peach Stones, &c.--Another Answer to inquiries.

Please inform your correspondent, Jonas Doolittle, that the seeds of the peach and apple should be planted in the fall, as they require

the action of the frost. Open the pits of the peach with a hammer, which is quickly done, without injuring the seed by striking the pits upon the end. Sow them in drills, and cover them to the depth of an inch, or an inch and a half. If not convenient to plant them till spring, dig a hole in the ground and throw the pits into it, and cover them with leaves, potatoe vines, or straw, to prevent them from drying. Just as soon as the frost is out of the ground in the spring, they should be planted; if delayed too long they will not come up, especially should the weather become hot and dry.

If apple seeds are collected at a cider mill, great care should be observed in washing them from pomice that has not been fermented, as fermentation effectually destroys the vitality of the seeds. Take them from a cheese that has just been thrown from the press, and the thing alluded to will be avoided. If Jonas will follow the above directions, take my word for it, he will not be disappointed.

A HORTICULTURIST.

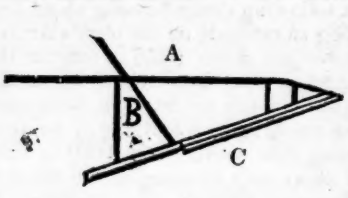
Fencing.

With those who are accustomed to extend their views beyond the present, the subject of providing materials for durable fencing, is regarded as not a little important for those portions of Michigan not naturally well supplied therewith. Some of the fairest lands of the State are destitute of fencing timber, being either quite nude of trees, or covered only with scattered oaks, whose limbs project too near the surface of the ground to be useful for fencing purposes. These portions are temporarily provided for, by resorting to timbered swails, or tamarack swamps, often at considerable distance. In many cases, material enough can be got in this way, only for an outside enclosure, and the advantages of a subdivision into smaller fields which the farmer knows so well how to prize, are obliged to be relinquished. With men so situated, it becomes a question of serious importance, whether there is any possible way by which their wants in this respect may be supplied. Tamarack poles furnish a fence of but little durability, and even the oak, our best fencing material, is said to be much less lasting than in the Eastern States. When the first stock of rails shall have rotted down, what shall be used as a substitute?

We will give what information we have, of the modes of supplying this deficiency, in the hope that it may elicit, from some quarter, something further.

On some of the prairies of Illinois, they have ntroduced the practice of throwing up a mound with a ditching plow, and building a fence upon that—thus saving three or four rails in a pannel.

The following description and cut of the plow used for this purpose are taken from the Prairie Farmer. The land-side is 11 feet long, and the mold-board 7½ feet long, and 18 inches wide, similar in shape to the mold-board of an old-fashioned bar-share plow. To the bottom of the mold-board is screwed a share, curved and projecting, like the shoe of a Cary plow. The share



may extend the whole length of the mold-board, but commonly it is in two pieces; the forward one being broader, projecting further and lower by an inch than the hinder piece. The land-side is a square piece of timber, four by six inches. A plate of iron should be screwed on the outside of the heel and point, sharp at the bottom, and extending an inch below the wood. These irons are to prevent the land-side from being crowded out of the furrow by the weight of the earth that the mold-board is required to push up onto the bank. A. is the land side; B. a lever to raise the mold-board as you get the bank higher and the ditch deeper; C. the mold-board.

This machine costs about as much as a breaking plow, and requires a good strong team. It cuts a ditch one foot deep, and three feet wide, on each side of where the fence is designed to be built. The earth from each ditch being thrown together between them, makes a bank of 18 inches or two feet high. A team and machine, it is said, will save 500 rails a day.

If the ditches are deepened to 2½ feet, and the mound between raised by the dirt thus thrown out, it will doubtless make a good fence without rails—while it lasts. Being liable to be washed by rains, and heaved by frosts, such a fence must necessarily stand in frequent need of repair, unless the sides can be covered with some grass, which will stand drouth, and interlace the surface thoroughly with its roots. Query—what will do this most effectually?

A writer in the Albany Cultivator is of opinion that the cheapest fence, when stones cannot be had, and lumber is scarce and high, would be a fence constructed of cast-iron pickets, the pattern for the construction of which should not exceed one-eighth of an inch for the most part, increasing to one-quarter where the holes are placed securing them to the iron bars. The bars should be twelve feet in length, cast very light, with holes in them at proper distances for riveting. A blacksmith could rivet from 10 to 12 pannels a day. They might be fastened to wooden posts. If kept thoroughly painted, the pannels would be indestructible. It can scarcely be expected however, that a mode of fencing involving so much expense, will meet with favor in this country.

The able editor of the American Agriculturist advocates a plan, which, if adopted, would cut the whole matter short at once, and save a world of trouble—aye, *if adopted*; there's the rub. He goes dead against the whole fencing system, and thinks it deserving to have been abandoned long ago. He is for keeping all domestic animals in yards, pens, and stables, not even having fences by the road-side. Mr. Allen is ahead of the age on this point—so far ahead, that we apprehend he will not be overtaken this hundred years. Even if public opinion could be brought to consent to such a radical change of system, and thus the execution of the plan be supposed possible, it strikes us as involving some inconveniences—such as

driving animals from one part of the country to another, or even from one neighbor to another, without injuring the crops by the way-side. On every such occasion, the whole *posse comitatus* would have to be ordered out, or a rope thrown around every cow's horn, and every swine's leg, with a man to each.

Seriously, however, we are aware there are countries where such a system is practiced, and the soiling of cattle, &c., which is connected with it, has important advantages—but we are not ripe for that yet.

There is a mode of fencing which, if no insurmountable impediments exist in our soil or climate would be far preferable to any other—uniting the qualities of durability, beauty, and in the long run, economy also. We refer to live hedges. In the experiments which have been made, on this point, a difficulty has been encountered, in finding any shrub or tree which will answer the purpose. The English hawthorn, we believe, is now generally acknowledged to be unsuited to our climate. It has been tested in the eastern states, and is not found to do well. Our climate is too hot and dry for it. We are not aware of any instances in which it has been applied, with success, to the fencing of a farm; we mean, with such success as to prove the use of it to be an economical and profitable method. We have, indeed, met with hawthorn hedges at the east, which would turn cattle; but they lacked compactness, —were not very thrifty, and they were said not to be long lived.

The buck-thorn, the locust, the mulberry, and the apple, have been recommended—and the first named is said to have been found to succeed well in New England. If so, we see no reason why it would not in this country, lying, as it does, in the same latitude, and with no essential difference of climate.

If permanent and efficient fences of this description can be raised here, they would certainly supply a great desideratum, and he would be a public benefactor in no common degree, who should be the means of their successful introduction. We copy below an article giving some directions for raising hedges, which we find in Hovey's Magazine, extracted from the Gardener's Chronicle; in which, it will be seen, the failures are attributed not to climate, but to improper management.

"*Raising Thorn Hedges from Seed.*—The fruit should be gathered about the end of October, care being taken to keep the seeds of the luxuriant growing sorts separate from those of the dwarfer kinds. A pit should be prepared about 1½ feet deep, into which the fruit is to be put with a mixture of earth or sand. It should be turned several times during the season, and if dry, a little water may be added; one or two inches of soil being a sufficient covering to insure the decomposition of the pulp. During the following October, a piece of good ground should be prepared, and the seed sown as it is taken from the pit, pretty thick in drills about one foot distant from each other, or in beds three feet wide. In the succeeding spring the plants will begin to appear; at which time, and throughout the season, they must be kept clear of weeds. If properly attended to, the seedlings will attain a height of from six inches to twelve inches, the first year. The following spring the strongest plants may be either transplanted into drills, or placed where they are intended to remain as a permanent fence. The smaller ones should be left in the seed-drills or beds for another year, when they may be treated in the same manner. In forming a live fence, the ground ought to be prepared as soon as the snow disappears, by making a trench about two feet broad, and a spade in depth. Along the centre of this trench the young plants should be put about six or eight inches apart, and afterwards well watered and firmly trodden in. Care should be taken to protect the young plants trom cattle, and keep them clear of weeds. The second year after planting, the thorns should be headed down to within six or ten inches of the ground, and each year afterward switched up on both sides to a centre ridge, so as to produce the shape generally termed sow-backed; hedges trained in this form, being less liable to be destroyed by snow resting upon them, than when cut flat at the top." If the method here recommended be properly attended to, Mr. M'Nab has not the least hesitation in saying that an excellent hedge of native thorns may be acquired five or six years after planting. At several places he saw the indigenous thorns employed as a fence; at least, they had been planted with that intention, and had attained considerable height, but from want of proper attention to pruning and weeding, they were so slender, easy access might be obtained between each stem. From such instances of mismanagement, an erroneous opinion seems generally to prevail, that hedges will not succeed in America. "But," he very properly remarked, "if newly planted hedges in Britain were equally neglected, there can be no doubt that they would soon degenerate, and become no better than those which I observed in the United States and Canada."

Advantages of Grass Crops.

A square foot of meadow, being dug up, and the dirt carefully washed from the roots, was found to contain at the rate of more than ELEVEN TONS *of vegetable matter to the acre.*

This simple fact speaks volumes to the farmer in favor of the policy of alternating grain-growing with frequent crops of grass. Wherever there is any need of taking measures to keep up or increase the fertility of the soil, (and there are few farms where this is not necessary,) a grass crop provides the easiest and most economical mode of so doing. Such a meadow as that from which the above-mentioned square foot was taken, if the whole product were turned under, would constitute a liberal dressing of manure. Mow it, and the amount still remaining to be turned under would be some seven or eight tons. Let us compute the value of such a dressing. On the whole, we believe it is worth nearly as much, ton for ton, as common barnyard manure—for some purposes, it is better. A New England farmer computes his manure at a dollar a load of about half a ton each. Here, we will call it worth only one-fourth as much. The eight tons of vegetable product in the grass ley are,

according to our supposition, equal to 16 loads of barnyard manure. The account then will stand thus:

16 loads of manure—25 cts.—	$4.00
Carrying out and spreading do.	2.00
Cost per acre,	$6.00

The sod of a fertile and well seeded meadow, then, with a proper portion of the aftermath, turned under, would be an application worth $6 per acre to the soil. Even this calculation will doubtless strike many as extravagant; but let them compare the condition, after a dozen years of culture, of a farm, which has been treated with a grass ley every third or fourth year, and one which has been, during that time, constantly cropped with grain, and the true value of such an application can be appreciated.

No inconsiderable portion of the benefits of grass crops to land, ensues from their use for the pasturage of sheep and cattle, in the solid and liquid excretions of those animals.

Again, the actual profits of an acre of land devoted to meadow, pasture, or the raising of grass-seed, are greater than when devoted to most, if not any kinds of grain.

This arises in part from the fact that the cultivation of grain requires the greater expenditure of labor, and when the price of labor is high compared with the price of agricultural products, it becomes the evident policy to look to those descriptions of farm industry which furnish their results with the least labor. The farmer thus avoids the mortification of seeing, at the end of the year, that all the *profits* of his farm have been expended in paying for hired help.

It arises from the further fact, that the proceeds of grass lands, are relatively higher in our markets, than those of grain. The farmer can better afford to raise wool at 25 cents a pound, and make cheese at six and butter at ten cents, than raise wheat at fifty cents, corn and rye at thirty, or oats at fifteen. And this relative difference in the market will be likely to be maintained, for the reason that the former description of products, wool, butter, cheese, &c., will bear transportation without a ruinous sacrifice, when the others will not.

Again, grass crops are the foundation stone of a system of rotation of crops—the most valuable link in the chain, without which every system is imperfect. It furnishes the very best kind of rest to the soil, to enable it to recover its energies for renewed cropping. It has been before explained how one crop exhausts more of one property from the soil, another more of another. There are besides principles in the soil, which require time, and the influence of summer heat and winter cold, to prepare them for their intended uses. Those before existing in the proper state, may have become more or less exhausted, and require to be replaced. For answering these purposes, the grass crop is precisely adapted.

It may perhaps be urged that much of the soil of Michigan is more natural for grain than for grass, and that it is best to devote it to that culture for which nature has best fitted it. But we have yet to learn that there is any soil in the State which, by proper management, may not be made to yield good crops of *some species* of grass. It is a peculiar excellence of our soil, that it is, generally speaking susceptible of growing any crop for which the climate is suitable; so that it admits of great variety of cultivation, and offers no impediment to any system of rotation that may be considered preferable. In this respect, it has the advantage over what are termed natural grass soils, which have such a preponderance of clay, as to be illy suited to tillage, and are thus confined almost exclusively to one description of products.

Before closing, we offer one or two practical suggestions.

I. We believe it to be injudicious to attempt to raise timothy on any but the heaviest description of openings—those termed timbered openings, until after the land has had ten or twelve years of cultivation. Until then, clover alone is more profitable. Indeed, clover will doubtless always be found the more natural grass for these lands, although by taking pains for it, good crops of timothy may be grown, after the land shall have been worked sufficiently. We question, however, whether some other kind of grass will not ultimately be found to mix with clover seed, which will supersede the use of timothy on these lands altogether. A singular objection is brought against this grass by those who have used it on the openings, that they cannot afterwards get rid of it. It does not alternate kindly in grain culture, but springs up in a troublesome manner among their crops. One farmer told us, hyperbolically, of course, that he would as soon have Canada thistles on his land.

II. Among the means which may be used to make this grass grow well on the openings, are, 1. Deep plowing, to bring up and mix with the surface soil, the sub-soil, which is generally a heavier soil, and more abundant in lime and clay—both circumstances favorable to the growth of timothy. Deep plowing will also enable the roots to strike deeper, and it will not be so soon parched with drouth.—2. The application of leached or unleached ashes, lime, marl, muck, or plaster, all of which tend to improve the texture of such soils, 3. High manuring.

Repent a good action if you can,

Domestic Economy.

A friend, (a good housewife,) sends us the following:

Cream of Tartar Biscuit.—Take four teaspoonfulls of Cream Tartar, and two of Soda or Saleratus, put each in a tumbler full of milk or water; then rub a teacup of butter or lard in flour enough for tea for a good-sized family, [Quere, how many is that?—Ed.] Add the contents of the tumblers and a little salt, mix and roll out about as thick as your hand, bake quick.

Nice Pudding for a family of five or six.—One teacup of rice, nine teacups of milk, sugar to your taste, butter the size of a small egg, any kind of spice you prefer, raisins, if you choose, [we *choose*, by all means,] a *pinch* of salt. Bake two hours.

Here is another contribution, like the last, unsought. Verily, we shall go up in the world, now that the ladies are beginning to take notice of us. We had begun to fear that the race of good housewives in Michigan had become extinct. "Nabby" will allow us to say she is hardly definite enough.

Recipe for potatoe pies.—As our fruit is mostly destroyed in Michigan, it may be interesting to lovers of pies to know that they can find a very good substitute in the potatoe. The potatoe is boiled, and prepared in the same manner as the pumpkin is for pies, except that it will require a greater abundance of "*fixens.*" When properly prepared, it makes a most delicious pie. NABBY.

Washing with river or spring water.—All river or spring water holds in solution, carbonate of lime, which is decomposed by alkaline soap, and the result is a soap having for its basis insoluble lime. This calcarious soap attaches itself to the linen, and the heat of the ironing melts and drives it into the article washed with it. There is, however, a very simple mode of avoiding this inconvenience; it is by putting into each litre of water used for washing, one or two grammes of potass or soda, before dissolving the soap in it. By this the calcarious soap will be precipitated, and the soap meeting with no lime in the water, will not undergo any decomposition, consequently no calcarious soap can remain in the linen. The use of soda or potass will not be at all expensive, because the alkali remains in the water, and contributes with the soap, to the cleansing of the linen.—*London Book of Facts.*

To Preserve Milk Sweet.—It is said that a spoonful of horse-radish put into a pan of milk will preserve the milk sweet for several days, either in the open air or in a cellar, while other milk will sour.—*Mass. Spy.*

To make Soap without boiling.—Take one gallon of lye, strong enough to bear up an egg, to every pound of grease. Put the lye into your barrel, and strain the grease hot through a sieve or cullender. Stir this three or four times a day for several days, or until it thickens. By this process you have soap, clean and with much less trouble, than in the old way.—*Am. Ag.*

From the Albany Cultivator.

Spontaneous Vegetation.

MR. TUCKER—I am very far from believing that any condition of the elements can compel nature into such a violation of her immutable laws, as the transmutation of wheat into chess; yet who can satisfactorily answer the question, *where does the seed chess come from?* I have it from the best authority that an abundant crop of chess has been grown on new land, when the cleanest of wheat has been sown. Some writers have pretended that chess will sometimes remain in the ground many years without vegetating; but our most experienced farmers assert that chess vegetates much more easily than most other seeds; that even red clover seed will remain in the ground much longer without vegetating than chess; yet we never see red clover appear on land where the seed has not been sown.

I would also ask the question, where does the seed of white clover come from? We have it from the best authority, that soon after the trees are cut off from a calcareous virgin soil, white clover invariably appears. A farmer who lives on the Allegany ridge in Pennsylvania, where there is no calcareous soil, informs me that he has tried the experiment of sowing lime and plaster on a patch of ground covered with sorrel, when the sorrel was the next season succeeded by white clover.

When I have seen young oaks growing in the midst of a forest of pine stumps, I have said to myself, where did the acorns come from to grow these oaks? they certainly were not brought here accidentally, because the nearest acorn bearing trees were forty miles off, in a new and sparsely settled country.

It is in perfect accordance with nature's laws, that the oak should follow the pine in the order of succession; most pine bearing soils, being doubtless originally too deficient in alkaline salts, to admit of the growth of the oak and other deciduous trees; but after the soil has been for hundreds of years acquiring carbonic acid, and alkaline matter, through the agency of the incumbent forest, it is sufficiently rich in salts, to admit of the growth of deciduous vegetation.

But apropos of chess; may we not sometimes refer its presence in the wheat field, to that mysterious principle in nature, which has from the beginning, caused organic matter to spring spontaneously from certain inorganic elements, dependant however for all its subsequent growth and maturity, to the same laws that control, as the French physiologist would say, the atmosphere of plants. S. W.

Waterloo, N. Y., 1845.

Reckless youth make rueful age.

Editor's Table.

☞ *The Editor expects to be absent from the 5th to the 25th of this month. He hopes to find many acceptable communications awaiting him on his return.*

THE SEASON AND CROPS. The month of August was favorable to the growth of crops—Corn and early planted potatoes had been too much injured by the parching drouth of June and July to promise well—'tho both have been much assisted. In some parts of the State, we understand the corn crop is good. On the whole, it may be nearly an average one. Late planted potatoes will be likely to do well. So far as our observation has gone, potatoes planted about the first of June, have, on the average of seasons, done the best. Spring wheat, and oats, were nearly a medium crop. Some parts of the State, as the central portion of the Grand River Valley, have had an abundance of rain throughout.

THE MARKET. It is with unfeigned regret that we perceive the market for the farmers' great staple, is lower than we had hoped and expected. The English harvest having turned out an abundant one, with no important deficiencies in any other countries of Europe, cut off the foreign demand, while the crop in our own country, was, taking the Union together, a good one; and these facts constitute a sufficient cause of the low price. Our wheat growers can *live*, but they cannot get rich by raising wheat at fifty or sixty cents a bushel.

HINTS ON FATTENING SWINE. After swine have gleaned the stubble ground, and got a *start*, the sooner they are penned the better. There will probably be little *mast* this year. Those who have raised barley or peas will find their advantage here. They will have hogs nearly half fatted before corn-time, taking the opportunity of the warm season, one day of which, for this purpose, is worth two of the cold. Fermented wash is found to fatten hogs much faster than fresh food, provided the fermentation has not gone too far. It is said, however, that an occasional change from fermented food to fresh, as well as from one kind of grain or roots to another, will fatten the animal faster than the best kind of food continued without change. Ground feed is much better than unground, and cooked feed far better than uncooked. There is perhaps no substance better on the whole, considering both the economy and rapidity of the process, than corn, ground cob and all, boiled into mush, and fed with sour milk, whey &c. For preparing corn thus, we would invite attention to the corn-crusher advertised on our last page.

Boiled potatoes, carrots, turneps and beets, will do well for a portion of the feed.

To preserve the health of the animals during the season of fattening, their food should be moderately salted. An occasional dose of pulverized charcoal should be mixed with their food. Sulphur is a good alterant in case of foulness of the skin or habit.

IMPORTATION OF SHEEP. We perceive with pleasure, that sheep are pouring into the State in large numbers. Most of the importation is from Ohio. We have not observed any of the fine wooled sorts, but have learned that Messrs Barker and Mills, of Manchester, Washtenaw Co., have imported 700 choice ewes, and 50 stock bucks of pure Saxon blood, selected fromt he flocks of Mr. Scoville, Ct. Mr. Church, of Vernon, Oneida Co., and Mr. Richmond, of Aurora, Cayuga co., N. Y. Some of the bucks, it is understood are for sale. Mr. Spafford, also, of the same town, we are told, has imported a superior flock—of what kind we have not learned. These evidences of a determination among some of our wool-growers, to aim at superior excellence in their breeds of sheep, are cheering, and will not fail to tell well in their account of profits.

N. Y. STATE AG. FAIR. The fair of the N. Y. State Agricultural Society will be held at Utica, on the 16th, 17th, and 18th days of this month. All persons interested in agricultural improvement, would find their attendance at this Fair, a rich and instructive treat. Fostered by the liberality of the State government, the fairs of this society, for the last four years have been subjects of increasing interest, and have done much towards the advancement of agriculture in the Empire State. The trifling *douceur* of $8000 a year, (trifling when compared! with the resources of such a State,) has been returned fifty-fold in the increased products brought about by the spirit of improvement and emulation excited, and the spread of the knowledge of the methods by which great results are effected. The appropriation to the society was made by the Legislature of 1841, for four years; and so well satisfied are the people of that state with the result, that the grant was, last winter, renewed.

RIPE PEACHES. On the 11th ult., the Editor of the Rochester (N. Y.) Democrat was shown a number of fine, ripe, mellow peaches, raised in the garden by H. N. Langworthy, in Irondiquoit. Can any horticulturist in Mich., boast of as much?

FRUIT LEFT YET.—A gentleman who has traveled a good deal over the State, the present season, informs us that, as we anticipated, some orchards on the shores of our beautiful little lakes are overloaded with fruit. In some instances, peach trees had to be propped up, as early as the first of August, to sustain the weight of the crop. Those, which he remarked more particularly, were on the *northern* shore of the lakes. We should have supposed that the South-East shore would have been most protected, as the breeze, which brought the frosts, was from the North-West.—How has it been found in the observations of others?

CULTIVATOR FOR PUTTING IN WHEAT.—Probably the best of all instruments for covering wheat sown in the ordinary way, is the Cultivator. It covers somewhat deeper and more uniformly than the harrow, and scarcely so deep as the plow—forming the just medium. Plowing in wheat with a light furrow is generally considered better than harrowing it in, especially on light soils—but the method is a slow one—and liable to the objection that it throws the seed into the intervals between the furrows, where it is too thick—leaving alternate spaces, where there is none. The cultivator is free from this fault.

The common cultivator which is used in cornfields will answer the purpose—but on smooth

fields, a larger one, with some five feet spread, will do the work as well, and much faster. Farmers who have never tried this method, it is believed, would find the cost of the instrument richly repaid the first season, by the increase of their crops.

DEEP PLOWING A PROTECTION AGAINST DROUTH.—The drouths of the past summer have afforded ample opportunity for comparing the advantages of deep and shallow plowing. Unless we are greatly deceived, it has been found that crops grown after shallow plowing have been parched and stinted by drouth, before those on deep-plowed fields showed any effects from it. We suppose this effect has been more perceptible, if the field had been previously in grass. The decomposition of a well buried grass sod, will preserve moisture for the roots of plants, through any ordinary drouth.

SEED WHEAT.—In selecting seed it is an important object to get only the heaviest and plumpest kernels. A cunning old yankee once made many a clean shilling, by selling to his neighbors a particularly choice kind of wheat for seed, which he called barrel-wheat. At length one of his neighbors chanced to come upon him inadvertently in his barn, when he was at work threshing his seed-wheat, and discovered his secret. His barrel-wheat was nothing more than common wheat, threshed by striking a bundle over a barrel, until the heaviest kernels were obtained, and then laying it aside for another.

The same object may be obtained by running wheat through a fanning mill, turning so rapidly as to throw over all but the heaviest kernels. It will pay richly for the trouble.

On no account, let any one sow shrunk, or otherwise imperfect seed. Like parent, like offspring. You cannot expect a healthy and vigorous plant, without perfect seed.

Whatever may be any farmer's opinion relative to the transmutation of wheat to chess, it will at all events be advantageous to take as much pains in cleaning seed, as though he fully believed chess would not grow unless he sowed it—*for it certainly will grow if he does.*

SUB-SOIL PLOW.—This term is generally used to designate an instrument, designed to run in the bottom of the furrow made by a common plow, stirring the ground to the depth of about ten inches, below the first furrow, but not throwing out any furrow slice. Its object is to loosen and pulverize the subsoil, making it permeable to moisture, and to the roots of plants. If the soil is wet, it makes it dryer, by allowing the surface water to pass down. If too dry, it serves as a protection against drouth, by allowing the moisture to pass readily up from below, and by allowing the roots of vegetables to strike to a greater depth.

Mr. Smith's use of this term, therefore, as applied to his double-mold-board plow, is not in accordance with common usage: but as his invention is intended to deal with the sub soil, bringing it up to the surface, there is, probably, no great impropriety in the name.

ACKNOWLEDGMENT.—We are indebted to Hon. Wm. Woodbridge for various valuable public documents,

HOVEY'S MAGAZINE OF HORTICULTURE.—We welcome to our table this standard publication.—It is very tastefully executed, in pamphlet form, and issued in Monthly numbers of 40 pages each, at $3 a year. Published in Boston, by C. M. Hovey, & Co.

THE AMERICAN QUARTERLY JOURNAL OF AGRICULTURE AND SCIENCE, *Conducted by Drs. E. Emmons and A. J. Prime.*

There is nothing that shows more plainly the the strong hold that Agriculture has taken on the public attention, and the rapid passing away among the things that were, of the prejudice against what is called book-farming, than the increase of periodicals devoted to the subject; and especially the establishment of such periodicals as that above named, of an elaborate and scientific character, and conducted by men of high attainments. There must be a demand, to call into existence such publications; and such is evidently the fact. Public attention is more fully aroused, and more advances are probably making in the Science of Agriculture at the present time, than has been the case at any former period. Some of the best minds of the age, are at work in this field.

The work of Drs. Emmons and Prime is published at Albany, each number containing from 160 to 200 pages, at $3 a year.

Cows.

Although we have been favored with the luxuries emanating from the Cow ever since the *flood*, we are still very ignorant of her value, and of the proper mode of managing her in sickness or in health. We were taught to believe that it was unnecessary, indeed *improper* in all cases, to milk a cow before she had her first calf; and if I am not mistaken, this practice prevails universally at the present day. Our attention was recently called to a favorite *Durham heifer*, whose udder was considerably inflamed and distended, nearly three months before her time of calving, and gradually increased for two months until the size was so enormous and the inflammation so great, that we were apprehensive matter would form in the udder. To prevent this, we ordered her udder to be well bathed, morning, noon and night, with water as warm as it could be applied without scalding. By this mode of treatment, the udder was relaxed but gradually increased in size, until we were satisfied that she could not be relieved unless she was milked. The first effort brought off several pints of thick serous or watery matter; the second day the discharge was a mixture of water and milk, and on the third day we had the pleasure of measuring seventeen pints of milk, and from this time forward until she calved,—which was about one month from the first time of milking,—she yielded from 16 to 18 quarts of fine rich milk every day. The calf found the udder in fine condition for sucking, the teats all soft, and the milk flowed upon the slightest compression of his lips. In this way we preserved the udder of one of the finest cows we have ever milked; and we feel very confident, if we had left *nature* to herself, that the udder would have been spoiled.

—*Tenn. Agriculturist.* J. SHELBY.

Drive thy business; let not that drive thee.

From the Prairie Farmer.

Sod-Plowing--Sub-Soil Plow.

BY ABRAHAM SMITH.

MESSRS. EDITORS,—I have found by experience that a sub-soil plow is absolutely necessary. Accordingly, as I had nothing better I have used a common prairie plow, and with it turned a furrow three inches in depth from the bottom of the sod furrow. This, turned on top of the inverted sod, is the finest bed for corn, any kind of small grain, turnips, or grass. One who has not seen the process will hardly believe what a fine bed, and so pliant to the harrow—if it don't fetch buckwheat, turnips, and timothy in grand style, then I shall be mistaken.

Plow Makers!

Can you make me a plow that will turn two furrows and lay the sub-soil furrow flat on top of the sod furrow, drilling corn between the two furrows. I have used a common prairie plow to throw out the sub-soil furrow, but it is not quite the thing; the principal fault is that it will not throw the furrow far enough. I shall make an effort to have both plows attached to the same beam—can it be done? I shall charge you no patent fees for trying—but warn you not to infringe on my rights as is frequently the case by patenting other men's inventions.

Ridge Farm, June, 1845.

Why, brother Smith, you are a mile behind the light-house—your Michigan name-sake has got the start of you by a year at least—the invention is already patented.

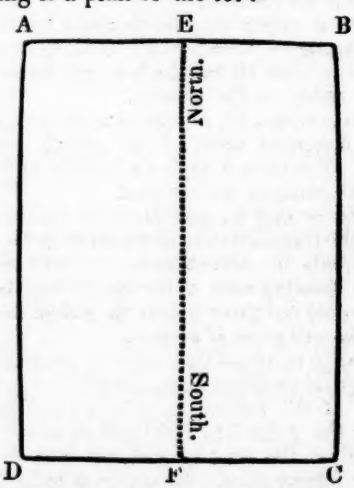
Electricity Applied to Agriculture.

We have long deferred allusion to this subject, although a very curious and interesting one, from a preference to others of a more immediately practical character. It is receiving so large a share of public attention, and some experiments are stated to have been attended with such surprising results, that it demands at our hands some notice.

It would seem that the influence of electricity upon vegetation is no recent discovery.—It is said that the natives of India have long practiced some simple applications of it, altho' the probability is, that they knew little of the principles upon which it operates. Forty years ago, an observation was made in the vicinity of Philadelphia, that a grape-vine planted in the immediate vicinity of a lightning-rod, grew with extraordinary luxuriance—and the fact was attributed to the influence of the rod. It is only, however, until within a very few years, that the subject has attracted the attention of the learned, and the experiments made have not yet been sufficiently numerous, nor are they all sufficiently authenticated, to enable us to conclude with certainty, whether the subject is of the great importance which has been claimed for it, or whether it will take rank among the illusions of the day, and fail to lead to any useful practical result. This point will soon be determined—for many experiments are now in progress both in this conntry and in Europe, conducted by men of skill and science, and the result will soon be before the world.

The following are some of the methods of application described in the journals, with the result.

There is, it is asserted, a constant flow of the electricity of the atmosphere around the earth from east to west; and the object of some experimenters has been, to arrest, in its passage, a portion of this current, and appropriate it to the uses of vegetation. Mr. Forster, of Scotland, placed poles eleven feet high above the surface of the ground, in a line due North and South, and over them stretched a common piece of iron wire, fixing the two ends of it to stout wooden pins, driven in close to the earth: around the edges of a plot of twenty four square rods, he sunk two or three inches beneath the surface, two wires of equal length, the ends of which were fixed, and in contact with the two ends of the suspended wire. The following is a plan of the lot:



At the points A, B, C, D, pegs are driven into the ground, to which is fastened a wire sunk 3 inches below the surface. At E, and F, are posts 11 feet high, over which passes a wire due north and south, and this is connected at the foot of the posts with the wire enclosing the space.

The ground was in barley. The barley within the wires assumed a lively dark green, and grew faster than the surrounding unelectrified barley; and this difference was maintained until the grain in due time ripened. On being harvested, the number of stalks was greater, the ears from one grain of seed more numerous and larger, and the kernel also larger and harder. The produce is stated to have been at the enormous rate of 104 bushels per Scotch acre.

Another method by which electricity has

been applied to field and garden culture, has been by placing edgewise in the ground a plate of copper, twelve or fifteen inches wide, and as long as may be desirable or convenient, say four to six feet, at one end of rows of vegetables, and a plate of zinc of like dimensions, and parallel with the copper plate, at the other: unite the plates by a copper wire, attached to one end of each. The moisture of the ground will oxidize the metals, and the copper wire on one side, and the moist earth on the other will complete the galvanic circuit. All the vegetables between the two plates will feel the influence, and grow, it is said, as though stimulated by the strongest manures.

The success of the experiment, however, appears to depend upon certain circumstances; for we discover accounts of some failures the present season. The plates were buried and connected according to directions, but no effect was discoverable, except upon vegetables in immediate contact with the plates and wire, and with them it was unfavorable. The failures are attributed to the dryness of the season; for damp ground is necessary in order to keep up the motion of the electric fluid.

The most simple method of applying this agent that has occurred to our notice, is, to take two small plates, the one of zinc, the other of copper; place them in a garden-pot, and unite the plates by a copper wire, soldered to each. Put in your plant or seeds, and moisten with very dilute sulphuric acid—one-fourth of an ounce to a gallon of water. Rain water alone, will do. The seeds or plant will immediately feel the effect, and vegetate with great rapidity.

These are some of the asserted facts—if correct, they are important—but even then, it is not to be supposed that electricity can supply the place of manures. Its action can only be as a stimulant—a very active and health-giving stimulant, it may be, but at best only serving to enable the plant to appropriate more rapidly the nourishment within its reach. It is not the nourishment itself; and the organic and inorganic constituents of plants, must be supplied under its action, as without it, from the earth and air. Indeed, the more prolific the vegetation induced, the more manures must be applied to the soil, to prevent its exhaustion.

New Pears.

The folllowing account of seven new seedling pears, raised by the Hon. H. W. Edwards of New Haven, Conn., is taken from Hovey's Horticultural Magazine for July:

Dallas.—This is a very late pear, and I think a very good one; I have not had it in bearing long enough to know how late in the season they may be kept, but I think it probable it will keep in a favorable situation until quite late in December.

Polk.—This is an autumn pear, and I think very fine, about medium size.

Frances.—A species of Virgouleuse, rather larger, and not quite so sweet.

Williams.—This is also a species of Virgouleuse, larger and higher flavored.

Edwards.—The Edwards is a very large, handsome pear, much like the old Bell pear.

Henrietta.—This is a summer pear, good size, of a green color, when ripe, and very fine flavored.

Calhoun.—The Calhoun is a late autumn pear, and of medium size, very high flavored and rich. I consider it one of my best, as you may know by the name.

A Chapter on Politics.

We crave the indulgence of our readers for dipping just this once into the forbidden waters of politics, by way of showing how certain things are managed among our neighbors of the Hoosier State. The picture somehow, strikes us as familiar, although we have never been over the line; and it is just possible that something a little resembling it, may occur to the recollection of some of our readers, as having been witnessed in our own Michigan. But, whether applicable or not, the sketch is so admirably drawn, that we are sure all will forgive its insertion.

Mr. Hatch—Now that the heat of politics is somewhat subsiding, will you allow me to exhibit some of the disastrous results which I have witnessed in Indiana, by reason of the almost universal predjudice against a *protective policy*. I am very sure that there are some chapters in the subject of protection which our farmers have not had presented to them. In consequence of the loose notions prevalent on this subject, almost all the farms in Indiana are destitute of barns, stables, sheep-cotes, pig-pens, and hen-houses. There are to be sure *things* very humorously and ironically *called* stables. They are very artfully constructed; for while they seem designed to protect from the rain and wind, they in fact are made to answer the purposes of both. The shingles or clapboards are so arranged as to bring the rain in streams through the enclosure; and the sides are adjusted so as to produce an admirable *draft* for the wind. I do not know how a horse could be *showered* and *chilled* more effectually than in the Hoosier stables. But the great part of all the herds and flocks are left without any protection, through our trying winters, except such as their instincts can devise.

To begin with the least: Turkeys and hens are left to roost on trees, bushes, fences, well-curbs (and as looking down into the well might make them dizzy, they very properly turn their heads the other way.)

* * * * *

The reasons for anti-protection in this case are, doubtless:—1. The necessity of hardening the constitutions of fowls; 2. To give roosters finer astronomical observations, that their *crowing time* may correspond to the true sidereal time; 3. But chiefly as an act of reciprocity to Coons, Foxes and Weasels, who are known to

sympathize very heartily in the popular doctrines of *Free Trade.*

The condition in which sheep are left through the winter, shows that our farmers have calculated that *wool* needs no protection.

My sympathies are every year enlisted in behalf of cows and cattle upon our farms, and in our villages. No one can walk the streets of Indianapolis, without meeting the supplicatory glances of most forlorn cows at every nook, where they may hide from the piercing west and northern winds. Many of them are left to subsist by picking at the dry grass, seared by the frosts, or by ranging the woods for weeds, and even tender shoots of trees. I have seen outline cows craunching straw from crockery crates, and litter from the stables, with a ravenous appetite. Perhaps their owners think that a cow can make milk with straw as easily as the Hebrews did brick. But these operations are very different, I think, though I have not tried either.

When I ventured one day meekly to expostulate with a crusty anti-protectionist on the subject, he sharply told me to "go to grass with myself," and I could only reply, "that his cow needed that mission more than I did." Around our cabins, and about farm houses of more pretension, may be seen a bevy of shivering creatures—crumpled with cold, or drenched with chilling rains, or coated with sleet.

In a still moonlight night, when a sound may be heard for miles—when the cracking foot-steps of a benighted traveller would echo through a whole village, how often have I heard the melodious murmuring of some dozen of swine, which have crept into a heap in the open air, to keep themselves warm. Their views of the ruinous effect of the anti-protective policy, are uttered at first in *staccato* grunts—these now and then swell out to a longer cadence and quite a number in chorus. And as some little pig insinuates himself under some veteran, there commences such a performance by the whole company, with varieties of tone, movement, and part, as I am bold to say, Mozart never dreamed of with all his music.

Whatever may be the effect of these notions against domestic *protection*, I am entirely certain that they work ruin to the great department of *Internal Improvement.* I beseech of you to exert your editorial authority to pursuade our farmers to redeem some of their waste time from politics and sprees, and devote it to the purposes of domestic protection.—*Ind. Cult.* B.

Reclamation of Wet Lands.

The dry season, after haying and the harvest of small grains, is a good time for reclaiming wet lands. These low lands have for ages been receiving accessions of vegetable matters from the washings of high lands, and from the constant decay of a luxuriant vegetable growth, that has been secure from the level surface and the moisture that has prevented waste by evaporation. Of these accumulations of rich matter the farmer can generally avail himself with for less cost than the value of the improvement.

Some wet lands worth as was generally supposed not more than ten dollars an acre, have been improved at a cost of from 50 to 60 dollars, so that they now pay all cost and a profit equal to the interest of $200 an acre. This is surely making an investment to good advantage, even better than that of stocks which may occasionally in good times command an advance of from 20 to 30 per cent. These lands are the most valuable for grass of any in the country; and in some cases they answer well for potatoes and cabbage, and even grain crops, but the most profitable crop on such lands is grass.

They continue long to yield good crops with an occasional top dressing of compost manure, and when this fails the sod should be inverted, the land well dressed and newly seeded. In this way good crops may be obtained for a thousand years in succession. By inverting and re-seeding in the summer after haying, a good crop will be obtained the next season, so crops can be taken annually without any loss in this respect, on account of the improvement.

In draining low wet lands, after making a main drain to carry off the water from springs, or to conduct off a stream, if there be one, drains should be made at the margin of the low land to receive the water from the high land. Some farmers have made ditches only two or three rods apart, running directly from the high land to the main drain, and yet the land was too wet for some distance from the high land. The only remedy is a drain along the margin. We have seen meadows of several acres, once very wet and valueless, made completely dry by marginal drains only; as no water rose in the meadow, it was only necessary to cut off that which ran in from the high land.

After draining wet lands, and removing bushes, logs, &c., if any, it is best to plough it if practicable. Some time since one of our correspondents described an ingenious mode which he pursued when the land was too soft to admit a team; by a long rope extending from the plough the team was kept on dry land, and the work done in an excellent and cheap manner, two hands carrying back the plough; and on the intervention of a hill, he fixed a machine with a moveable truck over which the rope passed, so that the team drew at right angles with the motion of the plough.

After ploughing, gravel, sand and loam are valuable to apply on top, before manuring.—If the land be quite wet and there be much depth of mud, gravel is preferable, as the water will more readily drain off from the surface, next to this sand is best. If there be but little vegetable matter, and the soil sandy or gravelly, loam should be preferred.—*Boston Cultivator.*

From the American Quarterly Journal, &c.

Charcoal--Its Properties and Uses.

This substance has excited great attention of late, in some portions of the country, although no accurate experiments have yet been made to test its value as a manure. In theory, it is certain that it possesses properties which are calculated to render it a very valuable substance in agriculture. And this arises from a power not peculiar to charcoal. All porous bodies have the property of absorbing the different gases in greater or less quantities. Charcoal, *after it has been heated to redness, and cooled without being exposed to the air*, will absorb ninety times its own volume of ammoniacal gas, and considerable quantities of others. If heated and cooled under water, and then placed in a confined portion of atmospheric air, it will absorb all the oxygen and leave pure nitrogen. Now, upon this property of absorbing gases depends its use as a manure. In itself, it has no valuable properties. It is one of the most indestructible of substances. Exposed to heat of the greatest intensity, if air is excluded, it suffers no change.—Moisture has no effect upon it. It has been said by some writer, that, after being in the ground for several years, it becomes converted into a sort of coaly earth. But, on the other hand, it is a well known fact that fence posts are often charred at the bottom, in order to preserve them from rotting, and it succeeds for a great number of years. In this case, no such change can have taken place. It is, at any rate, very doubtful if it is ever converted into earth, or, of itself, furnishes any food for plants. But it does absorb gases, and by the powerful condensing force which all porous bodies possess, they are made solid in the pores of charcoal. One cubic inch of charcoal will condence ninety cubic inches of ammonia or thirty-five of carbonic acid. And, holding it with all this force, how are they to give it off, to plants? One class of theorists will say, that the vital power of the plant can separate it.—But it is locked up in the pores of the charcoal, where not even the most minute fibre of the roots can penetrate. Others say, it is by the power of fixing gases that it does good, but they do not account for the giving them out. What then is it? Let us look a moment at another fact.

Water absorbs, at the common temperature and pressure, from seven hundred to eight hundred times its volume of ammoniacal gas, and when boiled will not part with the whole of it. Now notice the difference: charcoal absorbs ninety, and water eight hundred times their volume. The superior force of the water is seen at a glance. And what must be the result? Why, simply this: If charcoal is put upon land as a manure, however much gas it may have in its pores, the first shower of rain will separate it and carry it with it into the earth, ready for the use of the plants. In the mean time, the water takes the place of the gas in the pores. As soon as they become dry, and perhaps before, the process of absorption commences again, and again it is washed out.

This view of the case would indicate the use of charcoal as a top dressing to crops.—And this we believe to be the correct plan. Buried in the soil, it adds to its looseness, but is not exposed to alternate dry and wet, as when on or near the surface.

But its action in compost heaps, or as an absorbent of the urine of man and animals, depends upon another principle. The general opinion seems to be, that its use is to absorb the gases, ammonia, &c., which are given off during decomposition of animal and vegetable substances. That this is not the case, will readily appear, if any one will reflect a moment upon its well known action on animal matter. If meat which has begun to putrefy be packed down in charcoal, it is not only deprived of all bad smell, but the process of putrefaction is immediately stopped. No more gases are formed, and of course, none can be absorbed. Its effect in this case is to stop the process of decay. In the same manner, any animal or vegetable substance, if exposed to the action of charcoal, may be preserved for any length of time unchanged. What the power is by which this is done we do not pretend to say.

It is not, then, by absorbing gases that it is so useful in these cases, but simply through this power of preventing decay and preserving these matters in their unchanged state. Thus, when used in the compost heap, or when saturated with urine, all the substances it comes in contact with are brought under its influence, and when applied to the soil are gradually separated from it by the rains which fall upon them, and there undergo the decay which fits them to become food for plants.

Charcoal has the property also, of preserving vegetable as well as animal substances from decay. And it is probably on this account that it has been found useful in propagating plants from their cuttings. Many remarkable experiments have been made with it, and with great success. Even leaves have taken root in finely powdered charcoal, kept constantly wet.

☞ An hour's industry will do more to beget cheerfulness, suppress evil humors, and retrieve your affairs than a month's moaning.

☞ Have not the cloak to make when it begins to rain.

Large Chests.

Horses that are round, or "barrel chested," are invariably more muscular and enduring than those of an opposite kind. Scientific sportsmen are, in a great measure, guided in their opinion of a horse's racing qualifications by his girth just behind his shoulders; by this test, a jockey foretold the reputation and prowess of the celebrated racer Plenipotentiary, almost from the period of his birth. Cattle-dealers and butchers, in like manner judge by the chests and shoulders of cows and pigs what amount of fat they are likely to gain by feeding. All animals that have lungs large are remarkable for the vigor of their appetite, and the facility with which they appropriate their nutriment; such animals will feed upon the coarsest hay and straw, whilst their less fortunately constructed companions are fattened by no kind of food. An amusing anecdote is related of a simpleton, who, in trying to sell a horse, declared, that "*the animal's eating was mere nothing.*" The intelligence would, contrary to intention, have sufficed, but rare discrimination inferred from the horse's chest that the capacity of his appetite had been unwittingly misstated. He bought him on the hazard of an opinion, and had no reason to repent of his judgment.—*Boston Cult.*

Weaning Lambs.

It is better for the sheep, and lambs too, that the lambs be weaned the last of the summer, or very early in the fall. This gives the ewes a chance to gain flesh and strength to endure the hardships incident to our long cold winters. The lambs will be better for weaning them while they can have succulent food, than they would be if weaned on dry fodder, or when the grass becomes scarce and less sweet and nutritious. Many farmers neglect their flocks in this respect, allowing the sheep and lambs to manage this business as they please; but this is bad management, and a loss of lambs, sometimes of sheep, and light fleeces result from it. A little reflection upon the subject will convince the sheep raiser that it requires attention.—*Boston Cultivator.*

Revolution in Agriculture Anticipated.—*Liebig and his reputed discovery.*—The German papers give currency to the statement that M. Liebig, the celebrated Professor of Chemistry at the University of Geissen, has discovered a mineral substance, which, when combined with guano, will produce one of the most fertilizing manures known. It is added, that a joint stock company, with a capital of £120,000 stg. composed for the most part of leading English capitalists, was immediately on the discovery being made, formed for the purpose of carrying on upon a large scale the manufacture of the new compound. Among the subscribers are, however, several eminent professors of agriculture, who, according to the *Impartial du Rhin*, give out that the application of this substance to the culture of lands, will produce an entire revolution in the agricultural system.—*American Farmer.*

Preservation of Manures and Destruction of the Effluvia.—In a letter to the celebrated French chemist, M. Dumas, M. Schalterman says he finds by experiment, that the application of sulphate of Iron, or Green Copperas, at once fixes the ammonia, flying off from putrefying manures, and destroys their odor. It will have almost instant effect upon the foulest fæcal matters.

It is applied either in solution or solid. It will not only preserve the contents of sewers, cesspools, public privies, &c., in the most valuable state for agriculture, but render these innocuous, both while being filled, and in the process of emptying. The action of copperas is so energetic that M. Schalterman finds that if mixed with the foulest contents of a cesspool or privy for a few hours, the mass may be removed without any sensible odor.—*London Book of Facts.*

Mode of managing seed-wheat.—An experienced wheat-grower has described to us his method in respect to saving seed-wheat.—Before entering upon his harvest, he selects a portion of his field for seed, and reserves that for his last cutting. As his harvests are large, this portion gets fully ripe before he is ready to cut it. After drawing and mowing away the rest of his crop, he secures this also, but instead of placing it in a mow or stack, he puts it on a scaffolding over his barn-floor. This is done to prevent the seed-wheat from being affected by the steam which rises from wheat, and which, he thinks, would injure it. When seeding time comes, he thrashes out his seed, and sows it *without any preparation.* He has pursued this course a number of years, and has never had smut in his wheat to any extent since he adopted it.

Worms in heads of Sheep.—Make a solution of salt and water and common pepper; with a syringe inject the mixture forcibly up the nostrils of the sheep. This is a perfect cure.—*A. Beach in Prairie Farmer.*

☞ One good idea, acquired, and *carried out in practice* in the operations of a farm, will sometimes be the means of throwing hundreds of dollars into the farmer's pocket.

The best horse needs breaking, and the aptest child needs teaching.

Gleanings.

To kill Canada Thistles. We believe that a few patches of these troublesome pests are to be found in the State, and it is well to know beforehand how to treat them. The Albany Cultivator gives a method, which, it is said, will destroy them effectually in a single season. As soon as the thistles appear in flower, when they have become considerably exhausted by growth, plow them under, *deeply* and *well*, mowing the thistles previously, if necessary to the success of the work. Then they must be again turned under, at least once a month, till mid-autumn, or thereabouts, when, if the work has been WELL DONE, *the patch will be killed forever.* Wheat may be sown on the ground the same autumn. Several successful experiments have verified this method, and it is probably the cheapest, as well as most effectual that can be used. It generally requires four plowings, which leave the ground in excellent condition for a fall crop.

Silk Plant. Not the *Morus Multicaulis*, Reader, but a vegetable, producing silk—or what is so called. Our Consul at Tripoli, has sent to the Secretary of the National Institute, a specimen of this silk, produced in his garden. The seed came originally from Syria. The silk, like cotton, grows in pods. The plants grow to the height of ten or fifteen feet. The Consul sent also some of the seed. It is said to be adapted to any of the cotton-growing States.—*Balt. Sun.*

Budding. A Horticulturist in Massachusetts uses small strips of woolen cloth, such as are used in the manufacture of carpets, for tying around the stock enclosing the bud. This substance is elastic, and may remain on the stock through the fall.—*Bost. Cult.*

Cure for Lockjaw in Horses. Cases have occurred of the cure of Lockjaw in horses, by the plentiful use of cold water, along the back, poured in streams from above.—*Ib.*

Salt for Plum Trees. A correspondent of the Maine Cultivator states that he came into possession of an estate on which were many neglected plum trees. He pruned them, and they produced no fruit. He then applied about two quarts of salt to a tree, early in March, when the snow was on, and he had an abundant crop of delicious fruit. The theory is, that a portion of the salt is taken up by the roots, and enters into all parts of the tree, foilage, fruit and all, giving it a healthy state and making it unpalatable to insects.—*Ib.*

Smart Weed for Horses. This herb, green or dry, is an excellent medicine for horses in several diseases, particularly for a cough. Feed them as with grass or hay. Every farmer who has this weed, growing on his premises, should cut, dry, and save some against time of need.—*Ib.*

Preserving Fresh Meat. It is said that animals designed to be butchered, should fast one day previous in winter, and twice as long in summer, because when that is the case their meat will keep fresh much longer without injury, [*and probably be less likely to spoil after salting.*]—*Ib.*

Corn after Turneps. Mr. Bela Shaw of Rockford assures us that corn will not do well after turnips, he having known the trial made with the same results repeatedly. Can any body tell why? —*Prai. Farmer.*

Rotation of Crops—the five-field, or American System. To carry out this system, it is necessary to have the farm divided into five fields of equal size, and to crop them in the following manner. Let two fields be constantly in grass, one of which is kept to be mown, and the other for pasture. Have one other field in winter wheat, one in corn, and one in oats, barley, or flax. Plow up the field every spring for corn, which had been pastured the summer previous—pasture the field which had been mown—sow your oats, barley or flax upon the field from which your last crop of corn was taken—sow your wheat upon the oats, barley, or flax stubble, and sow your wheat with grass seed in the latter part of February or first of March, to be mown the year afterward. By so managing you have every field in its turn lying in grass three successive years—you have sod ground to plant corn upon—your oats, barley or flax is sown upon new ground, which had been cultivated to corn the year before—and you have summer grain stubble to plow up and sow wheat upon.

By dividing your land in this manner, you have but two fields to plow in the spring, viz. those for corn and summer grain: you have the same quantity of grain and grass every year, which makes regularity, and enables you to get through the spring work in time to attend to your harvest, and to finish your fall work before the cold weather commences.—*Ib.*

Sowing Grass Lands.

It is now becoming quite common for farmers to sow their grass seed in August or September.

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The result of sowing grass and grain together is to injure both crops, and very often to lose the grass entirely. Such loss and vexation may be avoided by sowing the grain alone, early in the spring, with such manure as has been allotted for the field; and as soon as possible in August, after the crop of grain has been housed, to plow the stubble in, turning a good furrow, that the stubble may have a chance of mouldering away, which the showers usually taking place about that time, and the heat of the weather, will generally bring about in the course of 12 or 15 days; before the end of August the field should be cross-plowed, the grass seeds sown on the furrow, harrowed, and rolled. It is of much importance in this part of the process to avoid any delay, and therefore it is quite needful to put in the grass seeds: even if the weather should happen to be dry at the time, they will lie safe in the ground, and be ready to improve the benefit of the first showers, when the grass will soon make its appearance, and generally make a good progress before the winter sets in. If the winter should prove favorable, nothing further is wanted to secure a good and lasting field of grass, than to draw the roller over it in the spring, as soon as the frost gets out of the ground; this will settle the roots of the young grass, which the frost will always heave up, and which without rolling, would be exposed to suffer from the sun and wind. In case that the winter should prove changeable, with cold turns and successive thaws and hard rains, then the grass will be exposed to suffer, by being killed in spots, perhaps

some of it washed away: in such cases it is needful, as soon as the frost is out of the ground, and it is not wet, to harrow the field over, and sow some fresh seeds.—*N. E. Farmer.*

The most successful efforts at stocking down which have fallen under our observation, were made in the fall, and without the emasculating operations of a previous crop of grain. Potato lands that have been well manured and carefully weeded, constitute a most excellent lodgment for all descriptions of grass-seed.—*Maine Cult.*

Gathering and Preserving Seeds.

It will soon be time to think about gathering seeds of many kinds for next year. There are but few people who consider that plants as well as animals may be much improved by selecting the best, most perfectly grown and earliest seed. The next year's crop will not only by this means be increased in quantity, but its quality will also be improved. All kinds of seeds that grow in husks or pods should be strung up and suspended from the ridge pole or a rafter, where they will be out of the way of mice, and where they will dry gradually. Great care should be taken to keep them from an excess of moisture, which will cause them to mould and destroy the germinative principle; and on the other hand, they will not be so good if they are shelled out (especially if it is done before they are perfectly ripe) and placed in the sun or any situation where they will dry very rapidly; they thus become shrivelled and will not so readily vegetate, although the vital principle may not be destroyed. The seeds of squashes, pumpkins, cucumbers, melons, &c., should be carefully cleaned from the pulp which surrounds them, and then be placed in a situation where they will dry gradually, being every day stirred up or turned to prevent their moulding. Seeds, after thus being prepared, may be preserved almost any length of time, in a perfectly good state, by packing them in pulverized charcoal and keeping them in a dry place, or stopping entirely from the air in a glass bottle.—*Maine Farmer.*

Successful Transplanting.—The Philadelphia U. S. Gazette states that the maple trees planted last winter in front of the State House, now present the appearance of having flourished in the same place for at least three years. They were six or seven years old, when set out. They were taken in mid winter, and transplanted with the roots encased in the very earth, then frozen hard, in which they had grown, and placed in front of the house. The whole double row seems to be as flourishing, as if the trees were standing in their native woods.—*Mass. Spy.*

☞ The fool is busy in every one's business but his own.

SEEDS.

The Subscriber will receive the following seeds in exchange for Fruit Trees, Ornamental Shrubbery, Green House Plants, Bulbous Flowering Roots or Biennial and Perenial Flowering Plants. The seeds may be delivered in large or small parcels and must be delivered early, or as soon as they can be cured:

100 lbs.	Red Onion of the growth of 1845.		
50 "	White do	do	do.
50 "	Yellow do	do	do.
100 "	Musk Melon.	50 lbs.	Water Melon.
25 "	Drum Head Cabbage.	25 "	Sugar Loaf Cabbage.
10 "	Early York	- - -	do.
500 "	Cucumber	5 "	White Celery
25 "	Blood turnep beet	10 "	Sage
25 "	Scarlet Radish.		

Ann Arbor, July 15, 1845. S. B. NOBLE.

ECONOMY TO PRODUCE WEALTH.

The Farmers, Millers, and Machinists in the Counties of *Jackson, Ingham, Livingston, Macomb, St. Clair, Oakland, Monroe, and Lenawee,* in Michigan and the north-western counties of Ohio, are hereby informed, that by applying to the Subscriber in Jackson, they can obtain a farmer's grain and labor-saving Machine, called *J. L. McKnight's Patent Corn Sheller, Crusher and Clover-rubber.*

Said Machine will, with one horse power, grind corn with or without cobb, or any other coarse grain, grind Plaster or Charcoal for manure, or rub clover seed from the hull. The ballance-wheel constitutes a sheller.

It is now generally understood that 33⅓ per cent is saved by grinding and feeding the corn cob. This has been thoroughly tested by many practical and scientific farmers, and also by distillers, showing the above result.

J. T. WILLSON.

Jackson Mich., July 25, 1845.

CONTENTS OF THIS NUMBER.

Calendar for September; Hints to the Cultivators of Fruit No 5. - - - - - - - - 81
Canada Thistles; Housing Sheep, No. 4. - - 82
Planting Peach Stones, &c.—Inquiries answered. - 83
Fencing. - - - - - - - - 84
Advantages of Grass Crops. - - - - - 85
Domestic Economy.—Cream of Tartar biscuit—Nice Pudding—Recipe for Potatoe Pies—Washing with river or spring water—To preserve milk sweet—To make soap without boiling; Spontaneous Vegetation. - - - 87
Editor's Table. - - - - 88
do; Cows. - - - - 89
Sod plowing—Subsoil plow; Electricity applied to Agriculture 90
New pears; Chapter on Politics. - - - 91
Reclamation of wet lands. - - - - 92
Charcoal—its properties and uses. - - - 93
Large chests; Weaning Lambs; Revolution in Ag. anticipated; Preservation of Manures &c; Mode of managing seed wheat; Worms in the heads of sheep - - 94
Gleanings.—To kill Canada Thistles; Silkplant; Budding; Cure for Lockjaw in Horses; Salt for Plum Trees; Smart weed for Horses; Preserving fresh meat; Corn after Turnips; Rotation of crops; Sowing Grass Lands. - 95
Gathering and preserving seeds; Successful transplanting 96

Michigan Farmer.

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